



Version 1.0
10/03/2020

OWNER'S MANUAL

MOTORIZED LEVEL CONTROL





CDL MOTORIZED LEVEL CONTROL

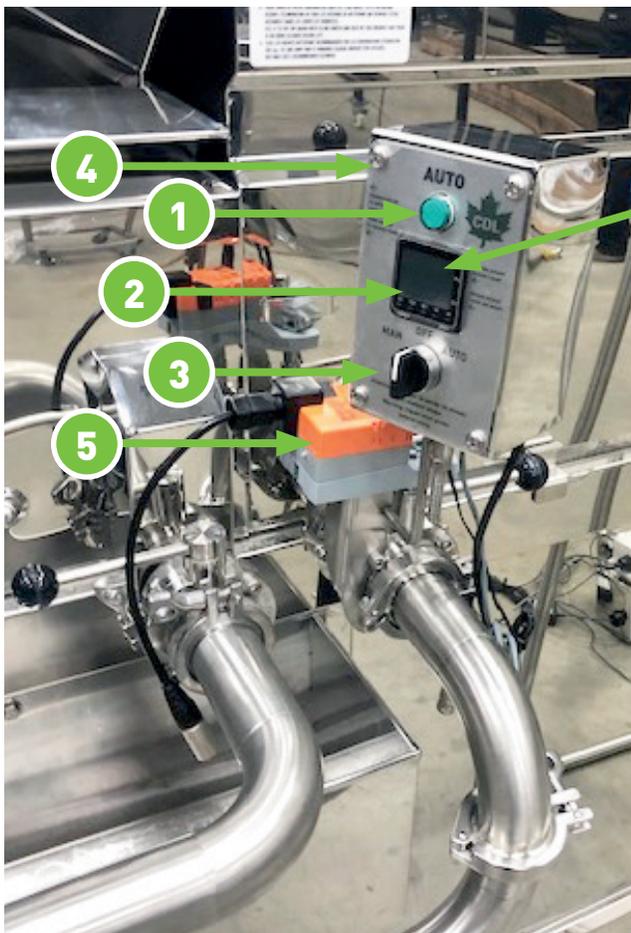


Always check that the level probe is clean and clean it daily with a soft cloth.

CDL MOTORIZED LEVEL CONTROL

The motorized level control has been designed to offer you an alternative to the classic float box. It allows you to control the sap level until it reaches the desired boiling height. It's simple to install, and the factory presets allow you to achieve more consistent levels.

Installing the product (*photo 1*): The level control can be installed in any location, but the main control box must remain accessible and the level display must be easily visible. This product must be installed by a certified CDL technician.



(photo 1)



1. Visual indicator for automatic mode (indicator lights up when the switch is set to automatic mode)
2. Desired and current level display
3. Mode selector (manual/off/automatic)
4. Manual opening control, 0–100%
5. Belimo engine and butterfly valve

The level probe mounts directly into your existing glass tube. Simply install the supplied support cap and place the probe in the desired position. Then install the replacement Protect-O probe.



Level probe

Protect-O rod

Probe support plug

Notes :

- Physically check that the levels match the digital display. If they do not match, the system will need to be recalibrated. (See procedure for setting probes.)
- Check the operation in manual mode (i.e. 0-100% = 0-100% opening)
- **Always check that the level probe is clean and clean it daily with a soft cloth.**
- Place your Protect-O probe at the desired height to stop the evaporator if levels drop below that point.

Opening in manual mode without electricity:

If failure or breakage occurs, press and hold this button firmly while adjusting the flow with the manual opening arm on the butterfly valve.



Manual mode

PROGRAMMING PROCEDURE, PLEASE REFER TO A CDL CERTIFIED TECHNICIAN FOR ANY PROBLEMS BEFORE CHANGING OR ADJUSTING FACTORY SETTINGS.

Setting the rear probe

First, make sure your ruler is aligned with the water pan level of your evaporator. The bottom of the probe should sit 1/2" below the tape measure, at -3" (fig. 1). Note that the last 1/2" at the bottom of the probe will not give you any readings. Then make a reference mark at 10 inches from -3" on the ruler, which will represent your reading at +7" (fig. 2). Doing this will allow you to have readings ranging from -3" to +7".



(Fig. 1)

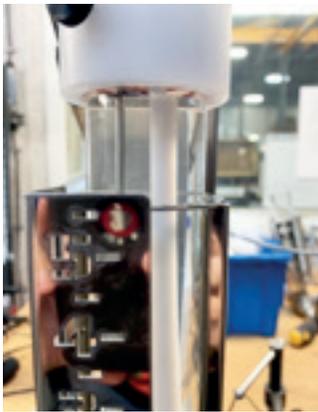


(Fig. 2)

Setting high and low levels

Once the ruler and rear probe have been adjusted, use a container to add water up to the high level you marked (+7). This will represent your probe at 100%. (Don't forget to close the ball valve to keep the water in the glass tube.)

To record the maximum height of your probe, press and hold the S and Z buttons simultaneously for 15 seconds until "Z50K" appears.



Add water



Hold S and Z



Z50K display

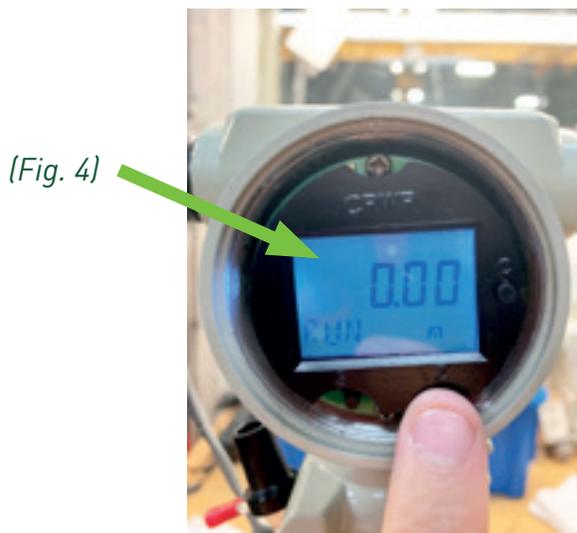
Once "Z50K" appears, release the buttons and press on the "S" button (on the left) to record your high level. Afterwards, you will see a black bar like the one in *figure 3*. This means that your high level has been recorded.

(Fig. 3)



To set your low level, remove water until it reaches -3", then press and hold the S and Z buttons simultaneously for 15 seconds until "Z50K" appears. Once "Z50K" appears, release the buttons and press on the "Z" button (on the right) to record your low level. Afterwards, the black bar like the one in figure 3 will disappear (fig. 4). This means that your low level has been recorded.

Check that the levels have been set correctly by adding and removing different amounts of water a few times, ensuring that the level matches the display (fig.5).



Setting the front probe

Repeat the same steps as for the rear probe, changing the values to 0 through +6". You will therefore need to set your probe 1/2" below 0 and make a mark at +6".

First, make sure your ruler is aligned with the syrup pan level of your evaporator. The bottom of the probe should be 1/2" below the ruler at 0" (*fig. 1*). Note that the last 1/2" at the bottom of the probe will not give you any readings. Then make a reference mark at 6 inches from 0" on the ruler, which will eventually represent your reading at +6". Doing this will allow you to have readings ranging from 0" to +6".



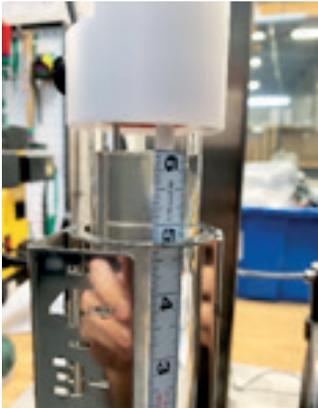
(Fig. 1)



Make a
mark

Once the ruler and rear probe have been adjusted, use a container to add water up to the high level you marked (+6). This will represent your probe at 100%. (Don't forget to close the ball valve to keep the water in the glass tube.)

To record the maximum height of your probe, press and hold the S and Z buttons simultaneously for 15 seconds until "Z50K" appears.



Add water



Hold S and Z



Z50K display

Once “Z50K” appears, release the buttons and press on the “S” button (on the left) to record your high level. Afterwards, you will see a black bar. This means that your high level has been recorded.

To set your low level, remove water until it reaches 0”, then press and hold the S and Z buttons simultaneously for 15 seconds until “Z50K” appears. Once “Z50K” appears, release the buttons and press on the “Z” button (on the right) to record your low level. The black bar will then disappear. This means that your low level has been recorded.



Add water



Hold S and Z



Z50K display

Check that the levels have been set correctly by adding and removing different amounts of water a few times, ensuring that the level matches the display.



Modes and additional information

Manual mode: set the valve opening percentage (0–100%) manually, using the opening control on the side of the control box.

Automatic mode: automatically opens the valve to the desired level.

Before switching the control to manual or automatic mode, make sure that the current level display matches your ruler on the glass tube. In automatic mode, check that the liquid has reached the right level.

Stock codes and replacement parts

Item number	Description
668763150	MODULATING FRONT LEVEL CONTROL 1-1/2"
668763200	MODULATING FRONT LEVEL CONTROL 2"
668763250	MODULATING FRONT LEVEL CONTROL 2-1/2"
668764150	MODULATING REAR LEVEL CONTROL 1-1/2"
668764200	MODULATING REAR LEVEL CONTROL 2"
668764250	MODULATING REAR LEVEL CONTROL 2-1/2"

Warranty

Parts and labour at a service centre for the CDL motorized level control are covered for one year. This warranty covers breakage and manufacturing defects. The product must be used under normal conditions to be covered. Loss of production is not covered. The user is responsible for performing regular inspections to ensure the CDL motorized level control is working properly.

Warranty limitations and exclusions

This warranty does not cover:

1. Products whose original serial number has been removed or modified or is unreadable.
2. Equipment that has changed ownership or is located outside of North America.
3. Equipment whose maintenance procedures have not been followed.
4. Loss of production caused by problems with the CDL motorized level control.
5. Loss of revenue caused by problems with the CDL motorized level control.
6. Service calls that do not involve a malfunction, manufacturing defect or material defect, or products that have not been used according to the provided instructions.
7. Service calls to verify installation or receive instruction on using the equipment.
8. Service calls after one year.
9. Damages caused by: repairs made by unauthorized technicians; use of parts other than original CDL parts or parts that were not obtained from an authorized technician; or external causes like abuse, misuse, accidents, fire or natural disasters.
10. Damage caused by abuse, negligence or modifications made by the client.
11. Damage caused by the use of products that were not intended for use with this equipment or by misuse of cleaning or lubrication products.

MAPLE SUGARING
EQUIPMENT

